What is claimed is:

1. A method for forming an ink-jet image, comprising the steps of:

(a) ejecting droplets of an ink through ink-nozzles of an ink-jet head of an ink-jet recording apparatus, the ink-jet head being provided with:

(i) a plurality of ink chambers having the ink-nozzles, each ink chamber having a dividing wall between adjacent ink chambers, the dividing wall containing an actuator which deforms in response to applied voltages to the adjacent ink chambers; and

(ii) a common ink tank which communicates with the ink chambers respectively,

the ink-jet recording apparatus being provided with a driving signal generator for continuously generating multiple driving signals applied to the actuator, the driving signal generator producing:

an expansion pulse which expands a volume of the ink chamber by deforming the actuator contained in the dividing wall of the ink chamber;

a shrinkage pulse which compresses the volume of the ink chamber by deforming the actuator; and

a predetermined quiescent period between the expansion pulse and the shrinkage pulse,

the droplets of the ink being ejected on a recording media from the ink-nozzles by a repeated expansion and shrinking of the ink chamber, and the quiescent period being regulated so as to decrease the cross talk among the ink chambers adjacent to each other,

(b) hardening the droplets of the ink ejected on the recording media via irradiation of an actinic ray,

wherein a volume of each of the droplets of the ink is between 2 to 15 pl, and the ink contains a radical polymerization monomer and a radical initiator.

2. A method for forming an ink-jet image, comprising the steps of:

(a) ejecting droplets of an ink through ink-nozzles of an ink-jet head of an ink-jet recording apparatus, the ink-jet head being provided with:

(i) a plurality of ink chambers having the ink-nozzles, each ink chamber having a dividing wall between adjacent ink chambers, the dividing wall containing an actuator which deforms in response to applied voltages to the adjacent ink chambers; and

(ii) a common ink tank which communicates with the ink chambers respectively,

the ink-jet recording apparatus being provided with a driving signal generator for continuously generating multiple driving signals applied to the actuator, the driving signal generator producing:

an expansion pulse which expands a volume of the ink chamber by deforming the actuator contained in the dividing wall of the ink chamber;

a shrinkage pulse which compresses the volume of the ink chamber by deforming the actuator; and

a predetermined quiescent period between the expansion pulse and the shrinkage pulse,

the droplets of the ink being ejected on a recording media from the ink-nozzles by a repeated expansion and shrinking of the ink chamber, and the quiescent period being regulated so as to decrease the cross talk among the ink chambers adjacent to each other,

(b) hardening the droplets of the ink ejected on the recording media via irradiation of an actinic ray,

wherein the ink contains a cationic polymerization monomer and an acid generating agent.

3. The method for forming an ink-jet image of claim 1, wherein the predetermined quiescent period between the expansion pulse and the shrinkage pulse is set so that a time difference between a center of the expansion pulses and a center of the shrinkage pulses is equal to a natural vibration period of the ink in the ink chamber.

4. The method for forming an ink-jet image of claim 2, wherein the predetermined quiescent period between the expansion pulse and the shrinkage pulse is set so that a time difference between a center of the expansion pulses and a center of the shrinkage pulses is equal to a natural vibration period of the ink in the ink chamber.

5. The method for forming an ink-jet image of claim 1, wherein the predetermined quiescent time between the expansion pulse and the shrinkage pulse is controlled based on a change of the ink natural vibration period produced by a change of an ink temperature change, the ink temperature being detected with an ink temperature detector provided in the ink chamber.

6. The method for forming an ink-jet image of claim 2,

wherein the predetermined quiescent time between the expansion pulse and the shrinkage pulse is controlled based on a change of the ink natural vibration period produced by a change of an ink temperature change, the ink temperature being detected with an ink temperature detector provided in the ink chamber.

7. The method for forming an ink-jet image of claim 2, wherein the cationic polymerizable monomer contained in the ink is an oxetane compound or an epoxy compound.

8. The method for forming an ink-jet image of claim 5, wherein the oxetane compound is a compound having an oxetane ring in which the 2- position is substituted.

9. The method for forming an ink-jet image of claim 5, wherein at least one of the epoxy compound is an epoxidized fatty acid ester or an epoxidized fatty acid glyceride.

10. The method for forming an ink-jet image of claim 1, wherein the actinic ray is an ultraviolet ray.

11. The method for forming an ink-jet image of claim 2,

wherein the actinic ray is an ultraviolet ray.

12. A printed matter produced with the method for forming an ink-jet image of claim 1, wherein a non ink absorptive recording material is employed on which the droplets of the ink are ejected.

13. A printed matter produced with the method for forming an ink-jet image of claim 2, wherein a non ink absorptive recording material is employed on which the droplets of the ink are ejected.

14. The ink-jet recording apparatus in the method for forming an ink-jet image of claim 1, wherein the ink and the ink-jet head are heated to 35 to 100 °C during ejection of the droplets of the ink.

15. The ink-jet recording apparatus in the method for forming an ink-jet image of claim 2, wherein the ink and the ink-jet head are heated to 35 to 100 °C during ejection of the droplets of the ink.